



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,464	07/23/2003	Susan Rebecca Cikanek	201-1168	1463
28395	7590	06/02/2004	EXAMINER	
BROOKS KUSHMAN P.C./FGTL 1000 TOWN CENTER 22ND FLOOR SOUTHFIELD, MI 48075-1238			KRAMER, DEVON C	
		ART UNIT	PAPER NUMBER	
			3683	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/604,464	CIKANEK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Devon C Kramer	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

*Dev K  
5.25.04*

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/23/03.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Objections***

- 1) Claims 4 and 10-12 are objected to because of the following informalities:

Claim 4 line 5, "the vehicle transmission" should be –a vehicle transmission--.

Appropriate correction is required.

Claim 10 lines 2-3 cites, "the gear selection sensor" which should be –a gear selection sensor--.

### ***Claim Rejections - 35 USC § 112***

- 2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 3) Claims 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 line 22 cites, "actuating the transition of a set of electro-hydraulic brakes".

Claim 12 line 6 cites, "de-actuating the transition".

These phrases are unclear. The specification explains a transition between a hill hold condition where the brakes are applied and an acceleration condition.

***Claim Rejections - 35 USC § 103***

- 4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

- 5) Claims 1, 4, 5, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crombez (6321144) in view of Williams et al (6589134).

In re claims 1 and 7, Crombez provides a hybrid electric vehicle (col. 1 lines 8-11) comprising: a vehicle frame; a plurality of drive wheels connected to the frame; an internal combustion engine connected to the frame that rotates in a single direction and selectively drives the wheels and provides engine compression braking torque at each drive wheel (inherent to all vehicles with a combustion engine); a generator motor (col. 1 lines 8-11) connected to the internal combustion engine that rotates in a same direction as the internal combustion engine, a powertrain control module (12) that controls the operating parameters of the internal combustion engine and generator motor, the powertrain control module being selectively actuated by a vehicle operator by actuating an accelerator pedal (20) for an acceleration torque request; an electro-hydraulic brake system (14) for vehicle braking, the electro-hydraulic brake system being selectively actuated by the vehicle operator by actuating a vehicle brake pedal for a vehicle brake torque request (26); an electronic brake controller (14) for controlling the electro-hydraulic brake torque applied to the wheels by the electro-hydraulic brake system; a vehicle rollback sensor (col. 7 lines 1-4) for determining a vehicle rollback state; and

wherein the electronic brake controller actuates the electro-hydraulic brakes, instead of applying an engine compression braking torque and an integrated starter generator motor braking torque in a predetermined hill holding condition, where the vehicle rollback state exists, the vehicle brake torque request exists below a predetermined vehicle brake torque request level, the accelerator torque request exists below a predetermined accelerator torque request level, and the internal combustion engine is running. See figure 2 steps 222, 228, 234, 236.

Crombez teaches the use of a motor generator, but lacks the teaching of the combination of an integrated starter generator motor. (Col. 1 line 14).

Williams teaches the use of an integrated starter generator.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the motor generator of Crombez with a starter function as taught by Williams et al to reduce the overall parts on a vehicle to improve efficiency and simplify assembly.

In re claim 4, see step 220, 228, 230 and 232. (Col. 1 line 66 –col. 2 line 13).

In re claims 5 and 10, it is inherent that the vehicle will remain stopped when the brake torque exceeds the acceleration torque. (Col. 2 lines 30-36)

6) Claims 2-3, 6, 8, 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crombez (6321144) in view of Williams et al (6589134) and further in view of Kinder et al (2003/0214186).

In re claims 2-3, 8-9 and 12, Crombez teaches an arrangement where when the accelerator pedal is actuated, the engine is engaged and the brakes are released. Crombez in view of Williams et al lacks the teaching of turning the internal combustion engine off during a predetermined hill hold condition.

Kinder et al teaches turning the combustion engine off when the vehicle is stopped. Paragraph 48.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the control system of Crombez as modified by Williams to turn off the engine when the vehicle is in a stopped state or predetermined hill hold condition as taught by Kinder et al in order to save fuel and improve the vehicles efficiency. Please note that adaptive filtering during a clutch engagement can be accomplished through a flywheel which are present in all vehicles with internal combustion engines.

In re claims 6 and 11, if the vehicle were in a two footer condition, the vehicle of Crombez as modified Williams and further modified by Kinder would be stopped. Please see rejection of claims 5 and 10 above.

***Conclusion***

- 7) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kuang et al, Lee, Polzin and Yamada et al teach similar hill holding devices.
- 8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C Kramer whose telephone number is 703-305-0839. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DK

*Devon R*  
*Devon R*  
*5-26-04*